19/SEPT/68

COMPUTER MAKERS AWAIT
ASCII DIRECTIVE

Nervous mainframe makers awaiting the feds' ASCII implementation letter -- due out this month, perhaps -- will be happy to note that at least one federal official doesn't think "it's necessary to specify internal operating codes."

The official is Herb Grosch, director of the NBS Center for Computer Science & Technology. But Grosch stresses he speaks for himself, implying others --at the center and probably elsewhere in the federal adp establishment -- want ASCII extended inside the box.

The letter (actually a directive) will require essentially all federal agencies ultimately to encode all their internal files in ASCII, besides using it for information interchange. First to be affected will be agencies acquiring adp systems for the first time, plus those replacing existing installations. Users who rely on existing files while augmenting older systems will be reprieved until they re-program. Other exceptions are likely -- notably some 64-character set scientific users; but they may have to adopt the full ASCII code if their systems are likely to be used partly for administrative applications.

Questions regarding packed numerics, sign conventions, subset and superset standards will be resolved after the letter is distributed.

NBS hopes to establish a central programming-testing facility to support ASCII conversion efforts of agencies which lack enough programmers of their own.

Industry reaction: IBM remains inscrutable while CDC and Burroughs squawk. A key question is whether the directive will give 6-bitters time to redesign. Honeywell has already started, apparently; it is reported to be developing an 8-bit machine meant for public unveiling in about two years. The federal attitude toward this problem is philosophic: "you can't make an omelet without breaking eggs," as one key official puts it.

Another says that once the directive is adopted, ASCII will be extended to related applications -- e.g., state and local governments; private users of census and other government statistics; contractors and universities that acquire dpe with federal money.

18 September 1968

ASCII Standard

One of the items in the proposed Procurement system presently being developed (extended CONIF) status that ASCII will be the standard code for the terminal. We that is, SIPS, doesn't have any apparent problems with ASCII and I presume the gradually extended use of ASCII as planned will take place in the Agency.

It is not for SIPS to say no if a no is required.

[redacted]

25X1A

18 September 1968

MEMORANDUM FOR: [redacted] 25X1A

SUBJECT : Federal Standard ASCII Code

1. In general, I am not aware of any significant problems arising in the development and operation of SIPS as a result of the adoption of the ASCII code as a Federal standard, at least none that will be unique to SIPS - the problems, if any, will apply across the board for all programs run on OCS 360 equipment.

2. At present a user may order a 360 that operates in either ASCII or EBCDIC (but not both). [redacted] mentioned recently that to his knowledge, no one (anywhere) had ever ordered an ASCII machine. He also said that OS currently will not run on an ASCII machine. 25X1A

3. I would imagine that the major considerations for EBCDIC users are along hardware lines, i.e. how will data (handled externally in EBCDIC) be read or written in ASCII format? Most likely, the process will require a hardware modification.

4. A couple of system/programming implications do come to mind though. For example, there is a difference in the collating sequence between ASCII and EBCDIC. In EBCDIC numerics have a greater

relative magnitude than alphas, and consequently will sort out after alpha characters. The reverse is true with ASCII. This factor has some coding implications also, e.g., if a programmer using EBCDIC were to test for alphas, he might test for a value less than "1". If the internal representation was later changed to ASCII the test would no longer be accurate.

5. Again, neither of the above problems appear to have much bearing on SIPS at this point, although they might have some effect on current applications in OCS. It depends on what type of hardware (or software) modifications are necessary.

[redacted] 25X1A